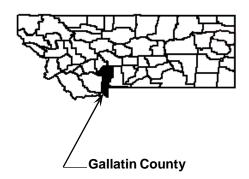


# GALLATIN COUNTY, MONTANA AND INCORPORATED AREAS VOLUME 2 OF 3

<b>Community Name</b>	<b>Community Number</b>
* BELGRADE, CITY OF	300105
BOZEMAN, CITY OF	300028
GALLATIN COUNTY	
UNINCORPORATED AREAS	300027
* MANHATTAN, TOWN OF	300034
THREE FORKS, CITY OF	300029
* WEST YELLOWSTONE, TOWN OF	300135

<sup>\*</sup> NON-FLOOD PRONE COMMUNITY



PRELIMINARY DATE: November 28, 2016



# **Federal Emergency Management Agency**

Flood Insurance Study Number 30031CV002B

#### NOTICE TO FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

Selected Flood Insurance Rate Map panels for the community contain information that was previously shown separately on the corresponding Flood Boundary and Floodway Map panels (e.g., floodways, cross sections). In addition, former flood hazard zone designations have been changed as follows:

Old Zone	New Zone
A1 through A30	AE
В	X
C	X

Part or all of this Flood Insurance Study may be revised and republished at any time. In addition, part of this Flood Insurance Study may be revised by the Letter of Map Revision process, which does not involve republication or redistribution of the Flood Insurance Study. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current Flood Insurance Study components.

Initial Countywide FIS effective date: September 2, 2011

Revised FIS Dates: Xxxxx xx, 20xxx

TABLE OF (	CONTENTS –	VOL	<b>JUMI</b>	${f E}$ ${f 1}$
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Р	2	$\alpha$	
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1.0	INTRODUCTION	1
1.1	Purpose Of Study	1
1.2	Authority and Acknowledgments	1
1.3	Coordination	2
2.0	AREA STUDIED	3
2.1	Scope of Study	3
2.2	Community Description	7
2.3	Principal Flood Problems	8
2.4	Flood Protection Measures	10
3.0	ENGINEERING METHODS	11
3.1	Hydrologic Analyses	11
3.2	Hydraulic Analyses	29
3.3	Vertical Datum	47
4.0	FLOODPLAIN MANAGEMENT APPLICATIONS	48
4.1	Floodplain Boundaries	48
4.2	Floodways	49
	TABLE OF CONTENTS – VOLUME 2	<u>Page</u>
5.0	INSURANCE APPLICATIONS	103
6.0	FLOOD INSURANCE RATE MAP	103
7.0	OTHER STUDIES	104
8.0	LOCATION OF DATA	104
9.0	BIBLIOGRAPHY AND REFERENCE	113

# TABLE OF CONTENTS VOLUME - 2 (continued)

## **FIGURES**

	<b>Page</b>
Figure 1. Floodway Schematic	50
Figure 2. FIRM Notes to Users	106
Figure 3. Map Legend for FIRM	108
TABLES	
TABLES	Page
Table 1. Initial and Final CCO Meeting Dates	3
Table 2. Detailed Studied Streams	
Table 3. Limit Of Detailed Study	4
Table 4. Summary of Discharges	
Table 5. Manning's "n" Values	
Table 6. NGVD29 to NAVD88 Conversion Factors	
Table 7. Floodway Data Table	
Table 8. Community Map History	
Table 9- Map Repositories	
1 1	
EXHIBITS	
Exhibit 1 - Flood Profiles	
3rd Avenue – Kagy Boulevard Split	001P
Baker Creek.	
Baker Creek Overflow	049P 074P
Baker Creek West Overflow	075P 081P
Black Avenue Split	082P 083P

### TABLE OF CONTENTS – VOLUME 3

Bozeman Creek	084P 102P
Bridger Creek	103P 106P
Buster Gulch	107P 109P
Camp Creek	110P 112P
Cedar Street Split	113P
Church Avenue Split	114P 115P
East Gallatin River	116P 132P
East Gallatin River Golf Course Overflow Reach	133P
East Gallatin River Overflow Reach	134P 136P
East Gallatin River Spillway Reach	137P
East Gallatin River Springhill Reach	138P
Figgins Creek	139P 142P
Flat Creek	143P 145P
Flat/Kagy Split	146P
Gallagator Split	147P
Garfield Street Split	148P
Golf Course Split	149P
I90 Diversion	150P 152P
I90 Lateral	153P 155P
Interstate 90 Split	156P 157P
Jefferson River	158P 161P
Kagy/Rouse Split	162P
Linney Road Split	163P 165P
Lower Black Avenue Split	166P
Madison River	167P 168P
Mathew Bird Creek	169P 176P
Mill Ditch Diversion	177P 180P
Moreland Ditch	181P
Museum Split	182P
Nash Road Split	183P
Nash Spring Creek	184P 189P
Rain Roper Split	190P
Rouse Avenue Split	191P 192P
Sourdough Trail Split	193P
Tracy Avenue Split	194P
West Gallatin River	195P 226P
West Gallatin East Overflow	227P 233P

#### PUBLISHED SEPARATELY

Flood Insurance Rate Map Index Flood Insurance Rate Map

#### 5.0 INSURANCE APPLICATIONS

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. These zones are as follows:

Zone A

Zone A is the flood insurance rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS report by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no BFEs or depths are shown within this zone.

Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 1 percent annual chance floodplains that are determined in the FIS report by detailed methods. Whole foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone. Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2-percent-annual-chance floodplain, areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile (sq. mi.), and areas protected from the base flood by levees. No BFEs or depths are shown within this zone.

#### 6.0 FLOOD INSURANCE RATE MAP

The FIRM is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the 1-percent-annual-chance floodplains that were studied by detailed methods, shows selected whole foot BFEs or average depths. Insurance agents use zones and BFEs in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols, the 1-and 0.2-percent-annual-chance floodplains, floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The countywide FIRM presents flooding information for the entire geographic area of Gallatin County. Previously, FIRMs were prepared for each incorporated community and the unincorporated areas of the county identified as flood-prone. These countywide FIRMs also include flood-hazard information that was presented separately on Flood Boundary and Floodway Maps (FBFMs), where applicable. Historical data relating to the maps prepared for each community are presented in Table 8, "Community Map History."

#### 7.0 OTHER STUDIES

This FIS report either supersedes or is compatible with all previous studies published on streams studied in this report and should be considered authoritative for the purposes of the NFIP.

#### 8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting the Natural and Technological Hazards Division, FEMA, Denver Federal Center, Building 710, Box 25267, Denver, Colorado 80225-0267.

Table 8. Community Map History

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)		
Belgrade, City of *	NA	None	None	None	None
Bozeman, City of	February 15, 1974	NA	February 13, 1976	March 15, 1982	July 15, 1988 September 2, 2011
Gallatin, County (Unincorporated Area)	May 16, 1978	NA	None	August 1, 1984	September 2, 2011
Manhattan, Town of *	None	None	None	None	None
Three Forks, City of	March 29, 1974	NA	September 26, 1975	November 19, 1980	September 2, 2011
West Yellowstone, Town of *	None	None	None	None	None

<sup>\*</sup>Non Floodprone

Figure 2. FIRM Notes to Users

# **NOTES TO USERS**

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map dates, refer to **Error! Reference source not found.** in this FIS Report.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

<u>PRELIMINARY FIS REPORT</u>: FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer's meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM.

The map is for use in administering the NFIP. It may not identify all areas subject to flooding, particularly from local drainage sources of small size. Consult the community map repository to find updated or additional flood hazard information.

BASE FLOOD ELEVATIONS: For more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables within this FIS Report. Use the flood elevation data within the FIS Report in conjunction with the FIRM for construction and/or floodplain management.

<u>FLOODWAY INFORMATION</u>: Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the FIS Report for this jurisdiction.

<u>FLOOD CONTROL STRUCTURE INFORMATION</u>: Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 4.3 "Non-Levee Flood Protection Measures" of this FIS Report for information on flood control structures for this jurisdiction.

<u>PROJECTION INFORMATION</u>: The projection used in the preparation of the map was state plane coordinates referenced to the Montana Coordinate System, North American Datum of 1983 (NAD83-2011). Elevations are referenced to the North American Vertical Datum of 1988 (NAVD88). Units are reported in International feet. GNSS-derived orthometric heights (elevations) were computed using Geoid 12A. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

ELEVATION DATUM: Flood elevations on the FIRM are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <a href="http://www.ngs.noaa.gov/">http://www.ngs.noaa.gov/</a> or contact the National Geodetic Survey at the following address:

NGS Information Services NOAA, N/NGS12 National Geodetic Survey SSMC-3, #9202 1315 East-West Highway Silver Spring, Maryland 20910-3282 (301) 713-3242

Local vertical monuments may have been used to create the map. To obtain current monument information, please contact the appropriate local community.

<u>BASE MAP INFORMATION</u>: Base map information shown on the FIRM was provided by Gallatin County GIS Department at a scale of 1:5,000.

The map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on the map.

Corporate limits shown on the map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after the map was published, map users should contact appropriate community officials to verify current corporate limit locations.

#### **NOTES FOR FIRM INDEX**

<u>REVISIONS TO INDEX</u>: As new studies are performed and FIRM panels are updated within Gallatin County, MT, corresponding revisions to the FIRM Index will be incorporated within the FIS Report to reflect the effective dates of those panels. Please refer to **Error! Reference source not found.9** of this FIS Report to determine the most recent FIRM revision date for each community. The most recent FIRM panel effective date will correspond to the most recent index date.

Figure 3. Map Legend for FIRM

SPECIAL FLOOD HAZARD AREAS: The 1% annual chance flood, also known as the base flood or 100-year flood, has a 1% chance of happening or being exceeded each year. Special Flood Hazard Areas are subject to flooding by the 1% annual chance flood. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. See note for specific types. If the floodway is too narrow to be shown, a note is shown.

Special Flood Hazard Areas subject to inundation by the 1% annual chance flood (Zones A, AE, AH, AO, AR, A99, V and VE) Zone A The flood insurance rate zone that corresponds to the 1% annual chance floodplains. No base (1% annual chance) flood elevations (BFEs) or depths are shown within this zone. Zone AE The flood insurance rate zone that corresponds to the 1% annual chance floodplains. Base flood elevations derived from the hydraulic analyses are shown within this zone, either at cross section locations or as static whole-foot elevations that apply throughout the zone. Zone AH The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot BFEs derived from the hydraulic analyses are shown at selected intervals within this zone. Zone AO The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the hydraulic analyses are shown within this zone. Zone AR The flood insurance rate zone that corresponds to areas that were formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood. Zone A99 The flood insurance rate zone that corresponds to areas of the 1% annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or flood depths are shown within this zone. Zone V The flood insurance rate zone that corresponds to the 1% annual chance coastal elevations are not shown within this zone. Zone VE

floodplains that have additional hazards associated with storm waves. Base flood

Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations derived from the coastal analyses are shown within this zone as static whole-foot elevations that apply throughout the zone.

Regulatory Floodway determined in Zone AE.

Non-encroachment zone (see Section 2.4 of this FIS Report for more information)



FLOOD INSURANCE IS NOT AVAILABLE FOR STRUCTURES NEWLY BUILT OR SUBSTANTIALLY IMPROVED ON OR AFTER APRIL 8, 1987, IN THE DESIGNATED COLORADO RIVER FLOODWAY

The Colorado River Floodway was established by Congress in the Colorado River Floodway Protection Act of 1986, Public Law 99-450 (100 Statute 1129). The Act imposes certain restrictions within the Floodway.

#### OTHER AREAS OF FLOOD HAZARD



Shaded Zone X: Areas of 0.2% annual chance flood hazards and areas of 1% annual chance flood hazards with average depths of less than 1 foot or with drainage areas less than 1 square mile.



Future Conditions 1% Annual Chance Flood Hazard – Zone X: The flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined based on future-conditions hydrology. No base flood elevations or flood depths are shown within this zone.



Area with Reduced Flood Risk due to Levee: Areas where an accredited levee, dike, or other flood control structure has reduced the flood risk from the 1% annual chance flood. See Notes to Users for important information.

#### OTHER AREAS



Zone D (Areas of Undetermined Flood Hazard): The flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible

**NO SCREEN** 

Unshaded Zone X: Areas determined to be outside the 0.2% annual chance flood hazard

#### FLOOD HAZARD AND OTHER BOUNDARY LINES



Flood Zone Boundary (white line on ortho-photography-based mapping; gray line on vector-based mapping)

Limit of Study

Jurisdiction Boundary

I imit

Limit of Moderate Wave Action (LiMWA): Indicates the inland limit of the area affected by waves greater than 1.5 feet

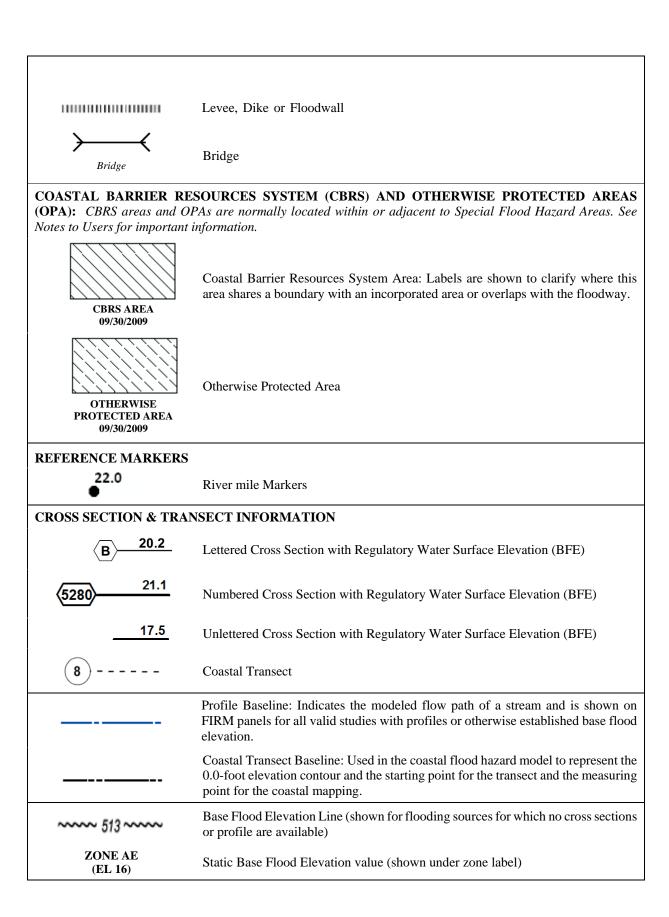
#### **GENERAL STRUCTURES**

Aqueduct Channel Culvert Storm Sewer

Channel, Culvert, Aqueduct, or Storm Sewer

Dam Jetty Weir

Dam, Jetty, Weir



ZONE AO (DEPTH 2)	Zone designation with Depth	
ZONE AO (DEPTH 2) (VEL 15 FPS)	Zone designation with Depth and Velocity	
BASE MAP FEATURES		
Missouri Creek	River, Stream or Other Hydrographic Feature	
234	Interstate Highway	
234	U.S. Highway	
(234)	State Highway	
234	County Highway	
MAPLE LANE	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile	
RAILROAD	Railroad	
	Horizontal Reference Grid Line	
_	Horizontal Reference Grid Ticks	
+	Secondary Grid Crosshairs	
Land Grant	Name of Land Grant	
7	Section Number	
R. 43 W. T. 22 N.	Range, Township Number	
$^{42}76^{000}$ mE	Horizontal Reference Grid Coordinates (UTM)	
365000 FT	Horizontal Reference Grid Coordinates (State Plane)	
80° 16′ 52.5′′	Corner Coordinates (Latitude, Longitude)	

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see <a href="http://www.fema.gov">http://www.fema.gov</a>.

Below is a list of the locations where FIRMs for Gallatin County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

Table 9- Map Repositories

Community	Address	City	State	Zip Code
Gallatin County	Gallatin County Courthouse Planning Department 311 West Main Street, Room 108  Bozeman		Montana	59771
Town Of Manhattan	City Hall, 120 West Main Street	Manhattan	Montana	59741
Town Of Three Forks	City Hall, 206 Main Street	Three Forks	Montana	59752
City Of Belgrade	City Hall, 91 East Central	Belgrade	Montana	59714
City Of Bozeman	Engineering Department, Stiff Professional Building, 20 East Olive Street	Bozeman	Montana	59715
Town Of West Yellowstone	Town Offices, 10 South Faithful	West Yellowstone Montana		59758

#### 9.0 BIBLIOGRAPHY AND REFERENCE

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